

Date: Wednesday, 25/06/2008 10:17:51 AM  
 User: Julie Lecocq

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	0H-58 SKIDTUBE ASSEMBLY
<b>Job Number</b> :	40078		
<b>Estimate Number</b> :	10475		
<b>P.O. Number</b> :		<b>Part Number</b> :	D058672041
<b>This Issue</b> :	25/06/2008	<b>S.O. No.</b> :	
<b>Prsht Rev.</b> :	NC	<b>Drawing Number</b> :	D2922 REV A1
<b>First Issue</b> :	1/1	<b>Project Number</b> :	N/A
<b>Previous Run</b> :	40077	<b>Drawing Revision</b> :	A1
<b>Written By</b> :		<b>Material</b> :	
<b>Checked &amp; Approved By</b> :	JLD 08.6.25	<b>Due Date</b> :	02/07/2008
<b>Comment</b> :	Est Rev:C 02.06.28 Re-format; ECN 258 KJ Est Rev:D 06.02.06 Added Dt8025 EC		

Qty: 1 Um: Each

## Additional Product

Job Number:



Seq. #:

Machine Or Operation:

Description :

1.0

DC

DOCUMENT CONTROL



*Scanned*



Comment: DOCUMENT CONTROL

Photocopy bluefile &amp; type labels per PPP D058-672-041 CHG 001

JLD 08.6.26

2.0

D2620

Skidtube, 206 Skidtube



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

*2*

Qty Part Number

Description

Batch

1 D2620

Bent Tube 3" OD

39178

SL 8-6-25

3.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Deburr Fwd edge of tube

SL 8-6-25

2-Weld D2794 cap as per QSI 004 and Dwg D2922. Use aluminum rod.

A/R Aluminum Rod

m/07877

SL 8-6-25

3-Cut aft end of D2620 bent tube as per dwg D2922

4-Drill pilot holes using drill jig DT8480 and DT8025 open to 0.312" dia.

5-Drill holes for wearplates using DT 8487 Open to 0.297" dia.

6-Open holes for aft cap and tow ring as per Dwg D2922.

SL 8-6-25

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Drawing Name: 0H-58 SKIDTUBE ASSEMBLY

Job Number: 40078

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

8-Remove inner indexing ridge on aft end of skidtubeas per Dwg D2922

9-Deburr and Blow out all chips form inside the tube

SL 8-6-25

4.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/06/25 (X)

5.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

08-06-25 (1)

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

SL 8-6-25

7.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

8-6-25

8.0

D2923

Step, OH58 Skidtube



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description

Batch

1 D2923 Web

040079

(1) K

8-6-25

9.0

SKIDTUBES1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open holes to finished size as per Dwg D2922(without cutting fluid)

2-Countersink crossbolt spacer holes as per Dwg D2922(without cutting fluid)

3-Deburr and Blow out all chips from inside the tube

4-Bond D2923 web in place as per QSI 015. Ensure holes lineup

A/R Sikaflex-291

Sikaflex expire date: 8-11-08

1107 2008

K 8-6-25

**Dart Aerospace Ltd**

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Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*S 0806126 (A)*

11.0

D2794

Forward Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Qty

Part Number

Description

Batch

1 D2794

Fwd Cap

*B 14588 BE 8-6-25*

12.0

D2649

Cross Bolt Spacer



Comment: Qty.: 22.0000 Each(s)/Unit Total: 22.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

22 D2649

Crossbolt spacer

*B 37859 BE 8-6-26*

13.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Weld D2649 cross bolt spacers as per QSI 004 and Dwg D2922.(Remember to back drill each hole to 0.250" before welding the other side)

A/R Aluminum Rod

*m107877 BE 8-6-26*

3-Grind welds flush as per Dwg D2922

*7 SL 8-6-26*

4-Counterbore 5/16" x 0.750" deep as per Dwg D2922

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*S 0807101 (A)*

15.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

*S 0807101 (A)*

**Dart Aerospace Ltd**

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Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

POWDER COATING

POWDER COATING



M 107925



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

Pressure wash m-k

08/07/02 (1K)

START TIME:

9:30

OVEN TEMPERATURE:

320

FINISH TIME:

10:00

FL/2W

08/07/02

17.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FL 08/07/04 (1)

18.0

D26483

Wearpad



Comment: Qty.: 5.0000 Each(s)/Unit Total: 5.0000 Each(s)

Pick:

Qty Part Number Description

5 D2648-3 Wearpad

Batch

B34591

FL

19.0

D265615

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description

1 D2656-15 Wearshoe

Batch

B34596

FL

20.0

D265621

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description

1 D2656-21 Wearshoe

Batch

B37101

FL

21.0

D2924

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description

1 D2924 Wearshoe

Batch

B35368

FL 08/07/04

(1)

**Dart Aerospace Ltd**

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Job Number: 40078

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description:

22.0

MS27039108

Screw



Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

Pick:

Qty Part Number Description Batch  
50 MS27039-1-08 Screw

m108077

FD.

23.0

AN960JD10L

Washer



Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

Pick:

Qty Part Number Description Batch  
50 AN960JD10L Washer

m104885

FD.

24.0

ALS41032130

Insert



Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

Pick:

Qty Part Number Description Batch  
50 ALS4-1032-130 Insert  
or (see QSI 017)

m105819

FD.

25.0

D26511

Plug



Comment: Qty.: 20.0000 Each(s)/Unit Total: 20.0000 Each(s)

Pick:

Qty Part Number Description Batch  
20 D2651-1 Plugs

B38273

FD.

26.0

D26513

O-Ring



Comment: Qty.: 20.0000 Each(s)/Unit Total: 20.0000 Each(s)

Pick:

Qty Part Number Description Batch  
20 D2651-3 O-Rings

B39784

FD.

08/07/04

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: OH-58 SKIDTUBE ASSEMBLY

Job Number: 40078

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

27.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2646 Aft Cap

*657755*

*FL*

28.0

MS27039108

Screw



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 MS27039-1-08 Screw

*m 108077*

*FL*

29.0

AN960JD10L

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 AN960JD10L Washer

*m 104885*

*FL*

30.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install inserts & wearpads as per dwg D2922. Insert a drop of Sikaflex at insert hole before installing wearplates.

A/R Sikaflex-291

Sikaflex expire date: *08-11*

*m 107888*

2-Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2922

3-Install D2646 Aft Cap and seal with Sikaflex adhesive. Clean excess adhesive

A/R Sikaflex-291

Sikaflex expire date: *08-11*

*m 107888*

3- Wing Walk as per Dwg D2922 and QSI 005 4.4

*m 108496*

Batch:

*21/FL08/07/07*

*FL*  
*08/07/04*

*①*

**Dart Aerospace Ltd**

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Job Number: 40078

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

31.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

S 02/07/08 @

32.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 02/07/08 @

33.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: C

8/7/8

(K)

SP

34.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/07/10

Job Completion



mf 08-07-08

40078

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DESIGN RF	DRAWN BY RF	DART AEROSPACE USA, INC. BELLEVUE, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D2922	REV. A SHEET 1 OF 2
DATE 99.10.14		TITLE OH-58 SKIDTUBE ASSEMBLY SCALE NTS	
A	99.10.14	NEW ISSUE	
AI	# CP 01.08.20	Ø0.640 WAS Ø0.625	

RELEASED  
00.05.11 #

Qty	Part Number	Description
X	D2922-041	SKIDTUBE ASSEMBLY
*	D2600-1	EXTRUSION
1	D2646	AFT CAP.
4	D2648-3	WEARPAD
1	D2648-5	WEARPAD
22	D2649	CROSS BOLT SPACER
20	D2651-1	PLUG
20	D2651-3	O-RING
1	D2656-15	WEARSHOE
1	D2656-21	WEARSHOE
1	D2794	CAP
1	D2923	WEB
1	D2924	WEARSHOE
50	AKS7-1032-130 or AKS4-1032-130 or ALS7-1032-130 or ALS4-1032-130	INSERT
52	AN960JD10L	WASHER
52	MS27039-1-08	SCREW

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) LENGTH OF D2600-1 EXTRUSION REQUIRED BEFORE BENDING = 160 INCHES.\*
- 3) INSERT D2923 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 4) USE DART DRILL TEMPLATE DT8406 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL AKS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL MS27039-1-08 SCREWS AND AN960JD10L WASHERS IN ALL INSERTS. SEAL WITH SIKAFLEX-241/291.
- 5) WELDING TO BE DONE PER DART QSI 004.
- 6) FINISH:  
ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2923 WEB  
POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED TO 0.50 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 7) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (20 PLACES).

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 40078

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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NO. 160

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliot  
Job number: 39841A  
Part number: D206 642 441  
Description: acc skid  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminium  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier P. D. Dyer Date of Test Coupon 08-06-23  
Welder Barclay Elliot Date of Test Coupon 08-06-23

The above named individual is qualified in accordance with AWS D17.1.2001 to weld